

Fig. 1

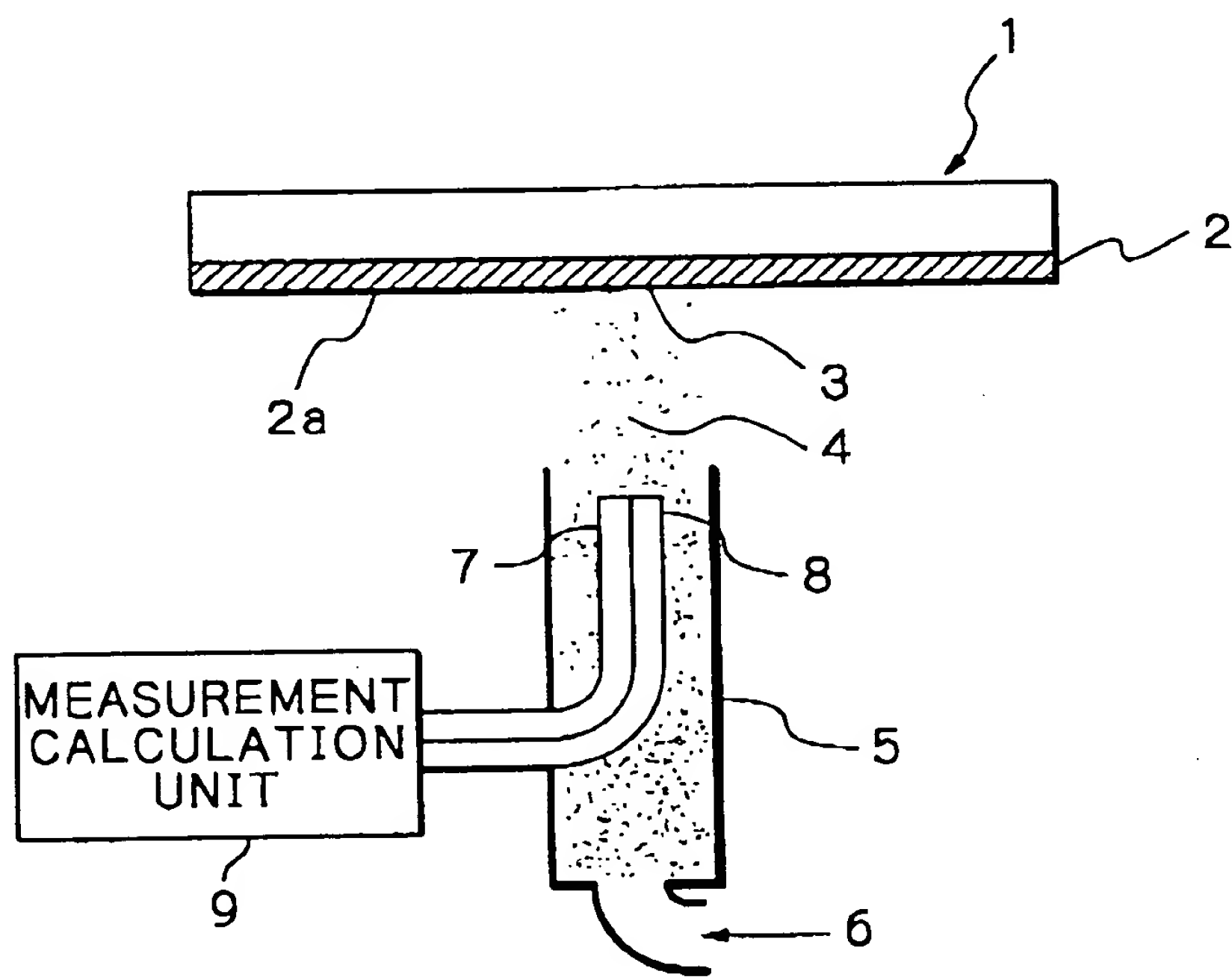


Fig. 2

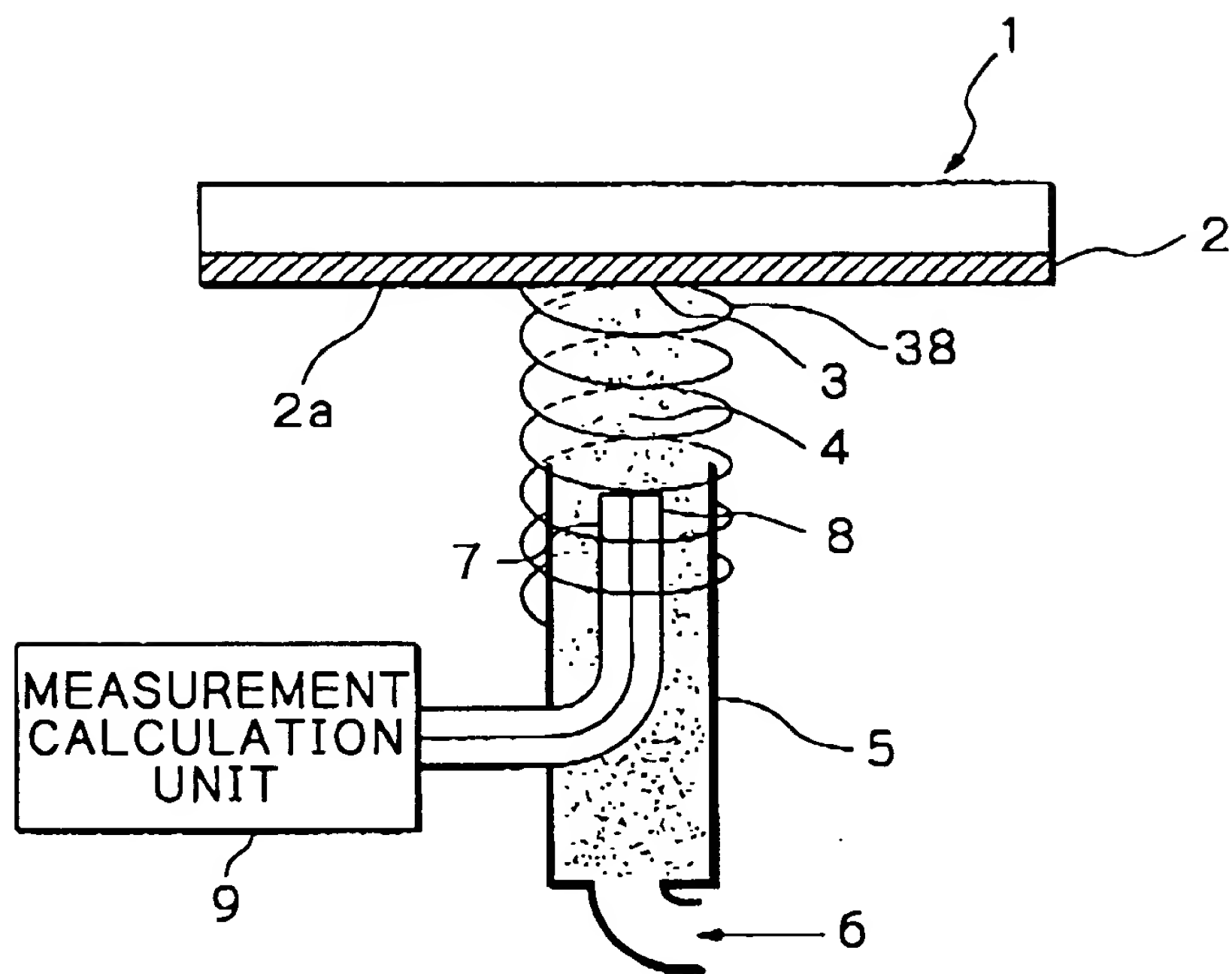


Fig. 3

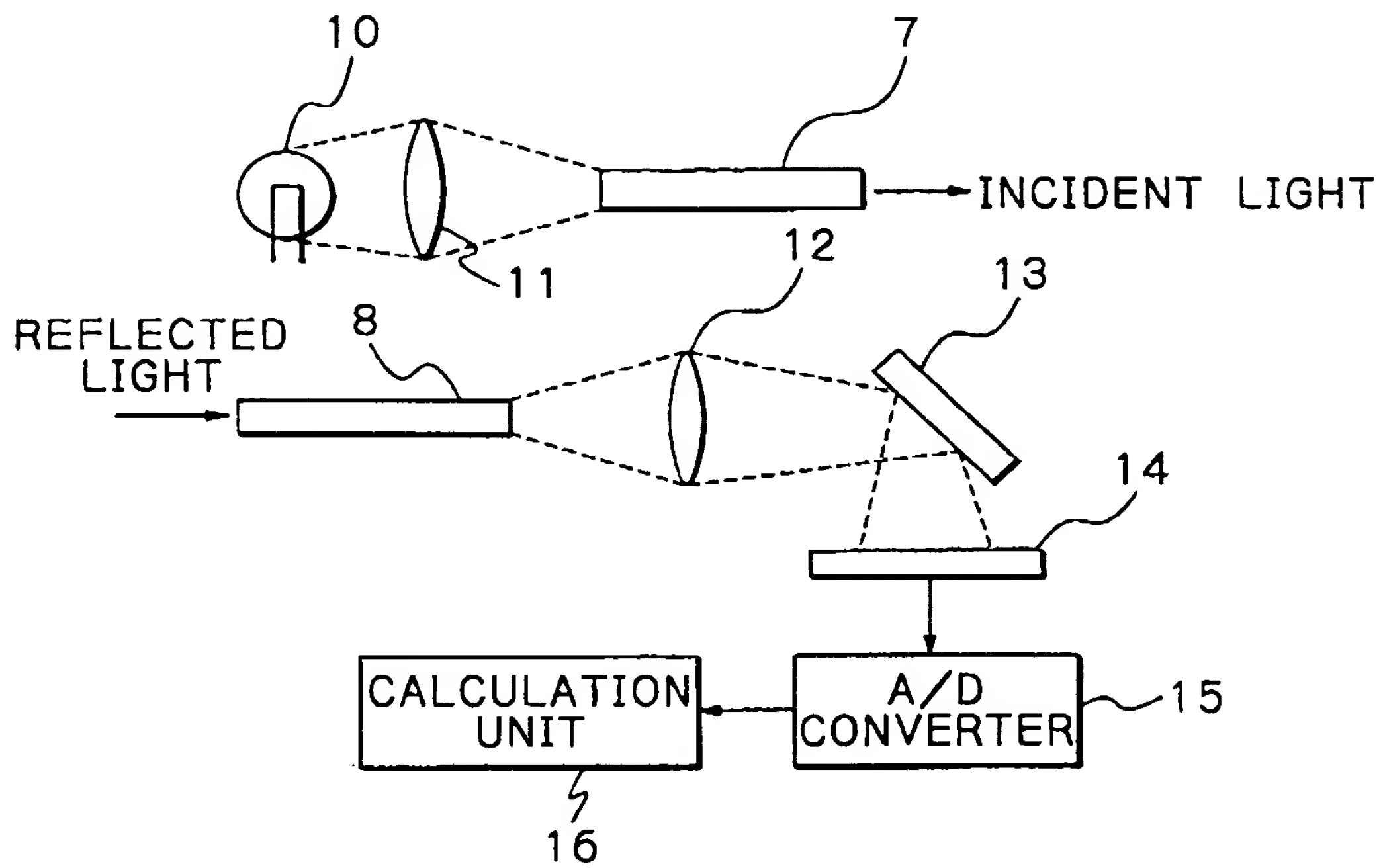


Fig. 4

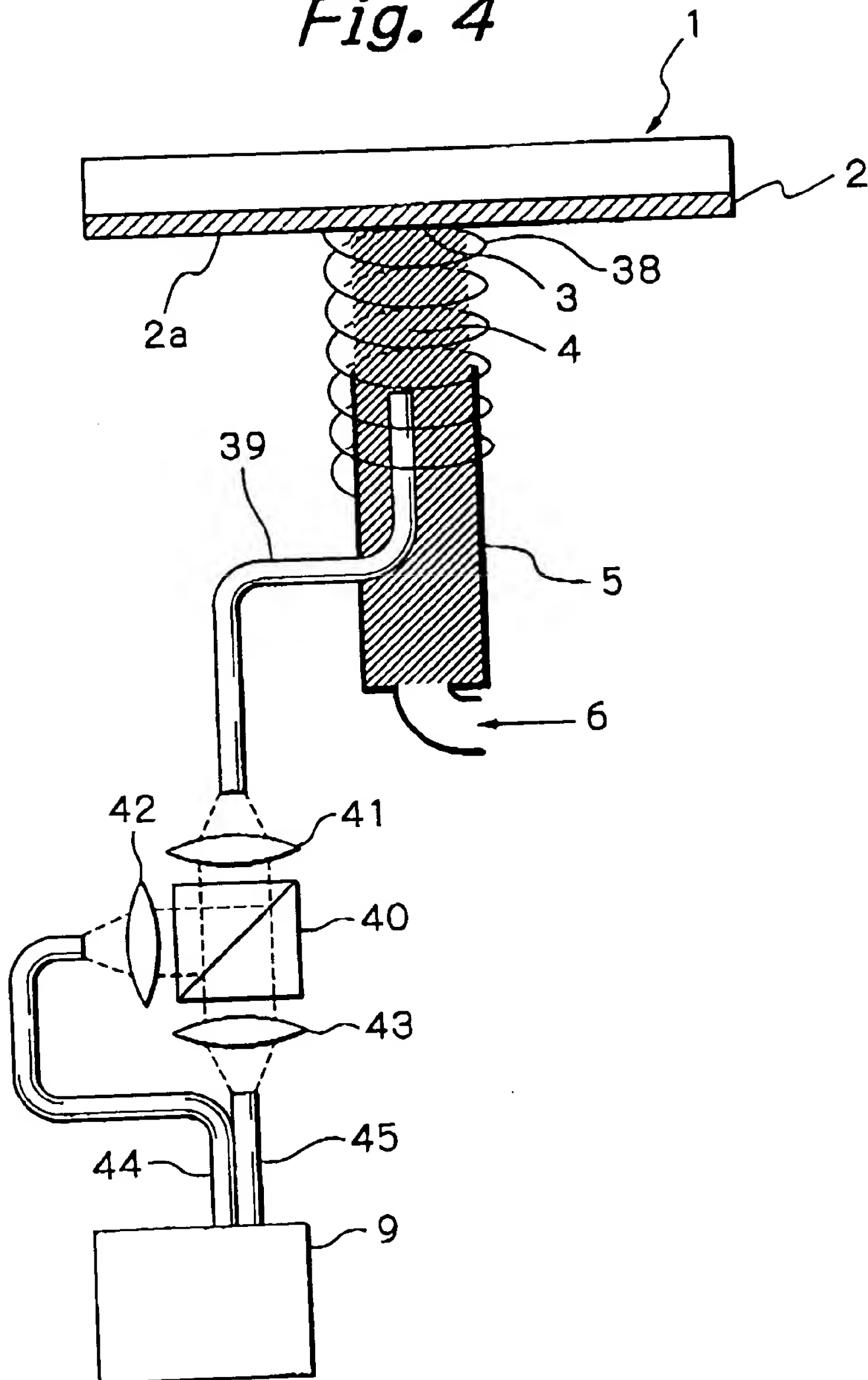
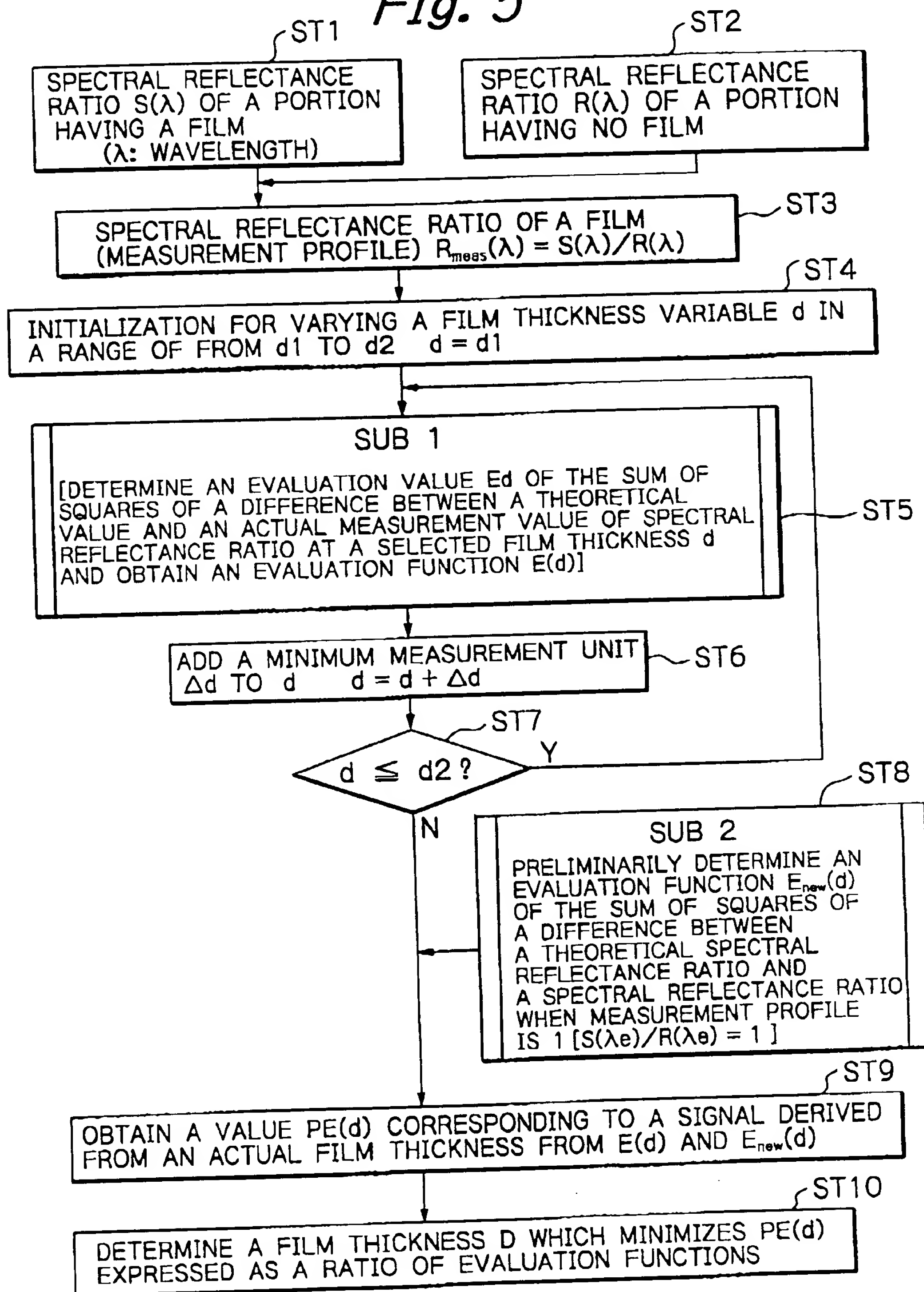


Fig. 5



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Fig. 6

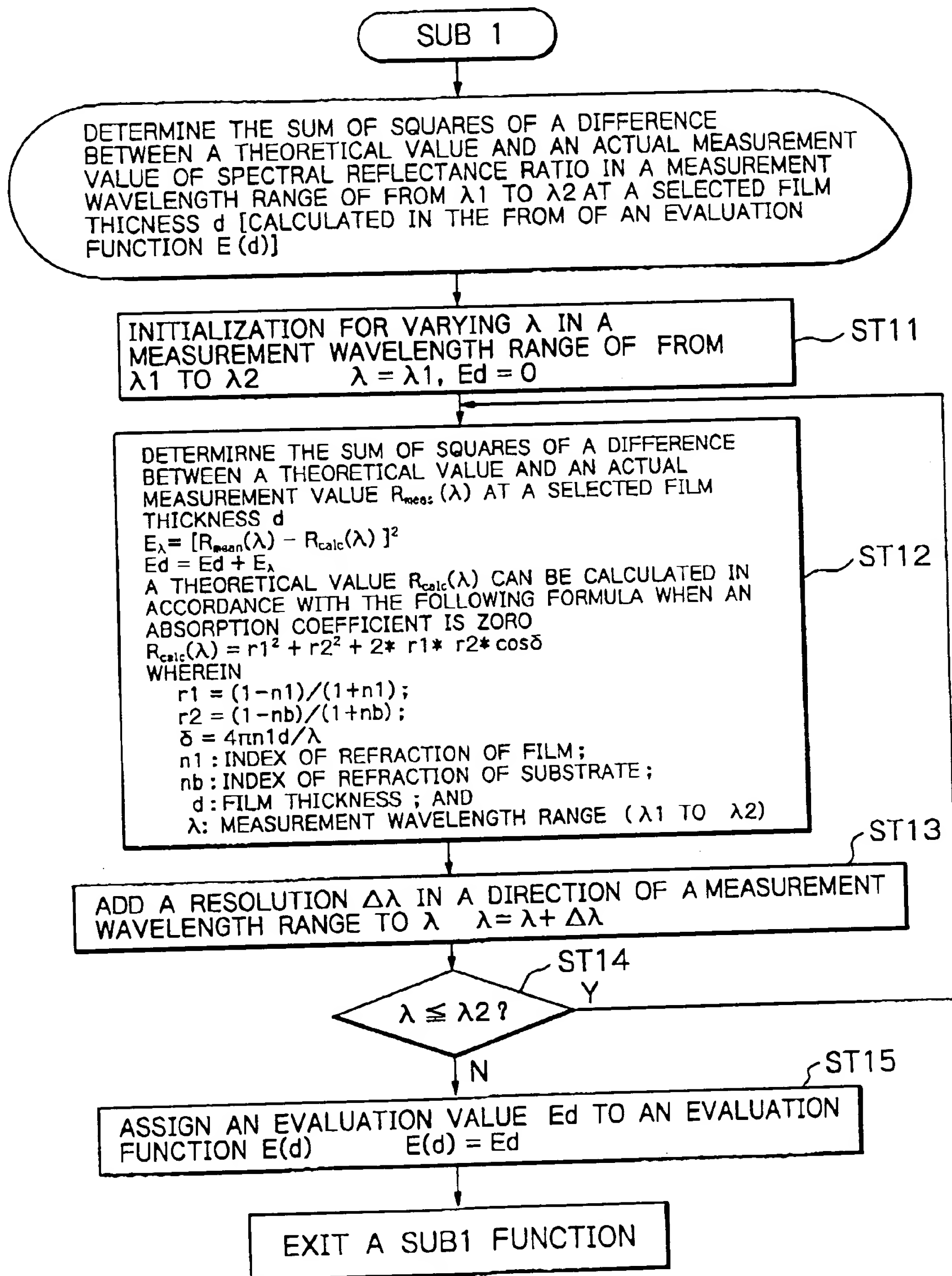


Fig. 7

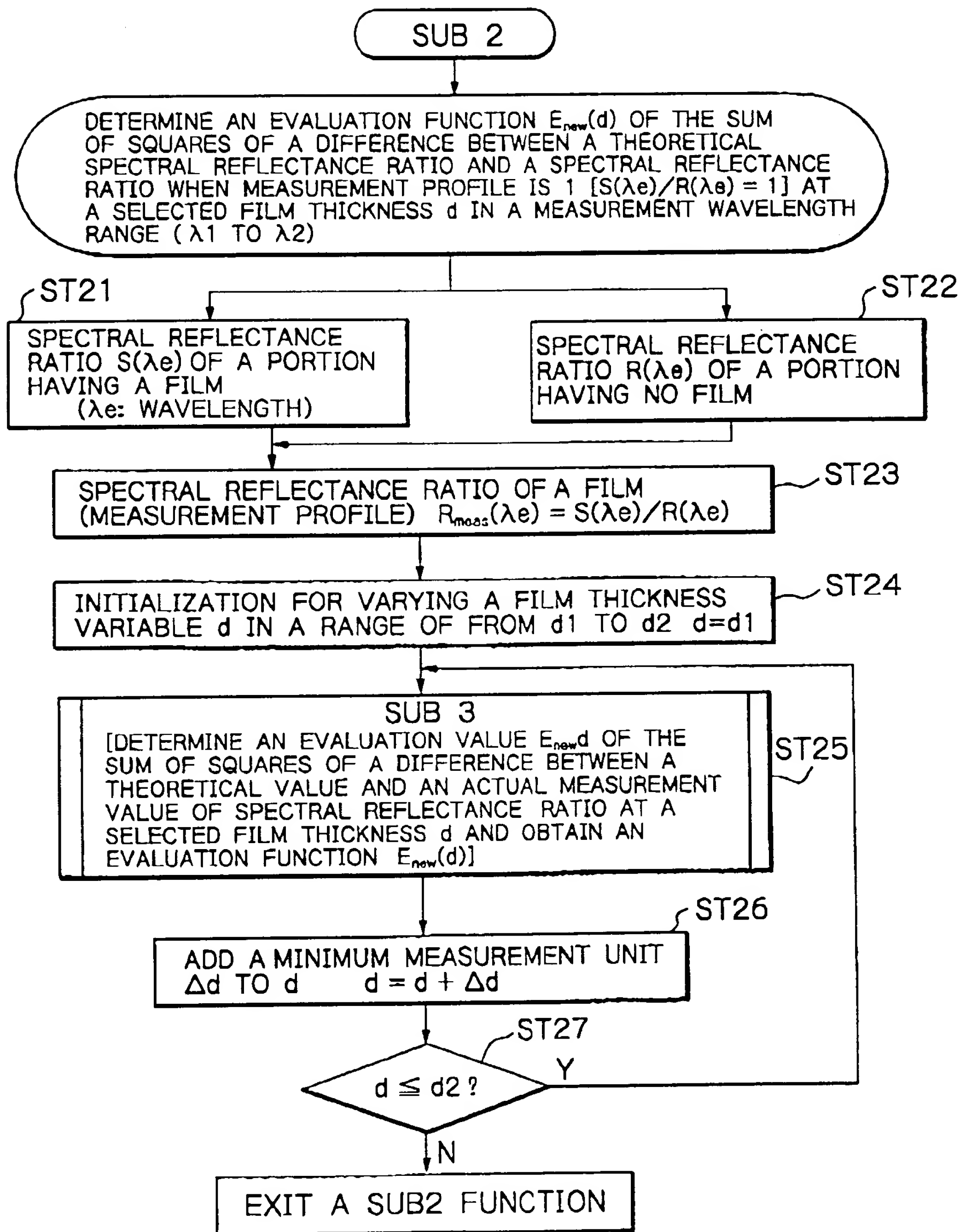


Fig. 8

SUB 3

DETERMINE THE SUM OF SQUARES OF A DIFFERENCE BETWEEN A THEORETICAL SPECTRAL REFLECTANCE RATIO AND A SPECTRAL REFLECTANCE RATIO WHEN MEASUREMENT PROFILE IS 1 [$S(\lambda_e)/R(\lambda_e) = 1$] AT A SELECTED FILM THICKNESS d IN A MEASUREMENT WAVELENGTH RANGE OF FROM λ_1 TO λ_2 [CALCULATED IN THE FORM OF AN EVALUATION FUNCTION $E_{new}(d)$]

INITIALIZATION FOR VARYING λ_e IN A MEASUREMENT WAVELENGTH RANGE OF FROM λ_1 TO λ_2
 $\lambda_e = \lambda_1, E_{newd} = 0$

ST31

DETERMINE THE SUM OF SQUARES OF A DIFFERENCE BETWEEN A THEORETICAL VALUE AND VALUE WHEN $S(\lambda_e)/R(\lambda_e) = 1$ AT A SELECTED FILM THICKNESS d
 $E_{\lambda_e} = [R_{calc}(\lambda_e) - 1]^2$
 $E_{newd} = E_{newd} + E_{\lambda_e}$
 A THEORETICAL VALUE $R_{calc}(\lambda_e)$ CAN BE CALCULATED IN ACCORDANCE WITH THE FOLLOWING FORMULA WHEN AN ABSORPTION COEFFICIENT IS ZERO
 $R_{calc}(\lambda_e) = r_1^2 + r_2^2 + 2 * r_1 * r_2 * \cos \delta$
 WHEREIN
 $r_1 = (1 - n_1) / (1 + n_1);$
 $r_2 = (1 - n_b) / (1 + n_b);$
 $\delta = 4\pi n_1 d / \lambda;$
 n_1 : INDEX OF REFRACTION OF FILM;
 n_b : INDEX OF REFRACTION OF SUBSTRATE;
 d : FILM THICKNESS; AND
 λ_e : MEASUREMENT WAVELENGTH RANGE (λ_1 to λ_2)

ST32

ADD A RESOLUTION $\Delta\lambda$ IN A DIRECTION OF A MEASUREMENT WAVELENGTH RANGE TO λ $\lambda_e = \lambda_e + \Delta\lambda$

ST33

$\lambda \leq \lambda_2?$

ST34

Y

N

ASSIGN AN EVALUATION VALUE E_{newd} TO AN EVALUATION FUNCTION $E_{new}(d)$
 $E_{new}(d) = E_{newd}$

ST35

EXIT A SUB 3 FUNCTION

Fig. 9

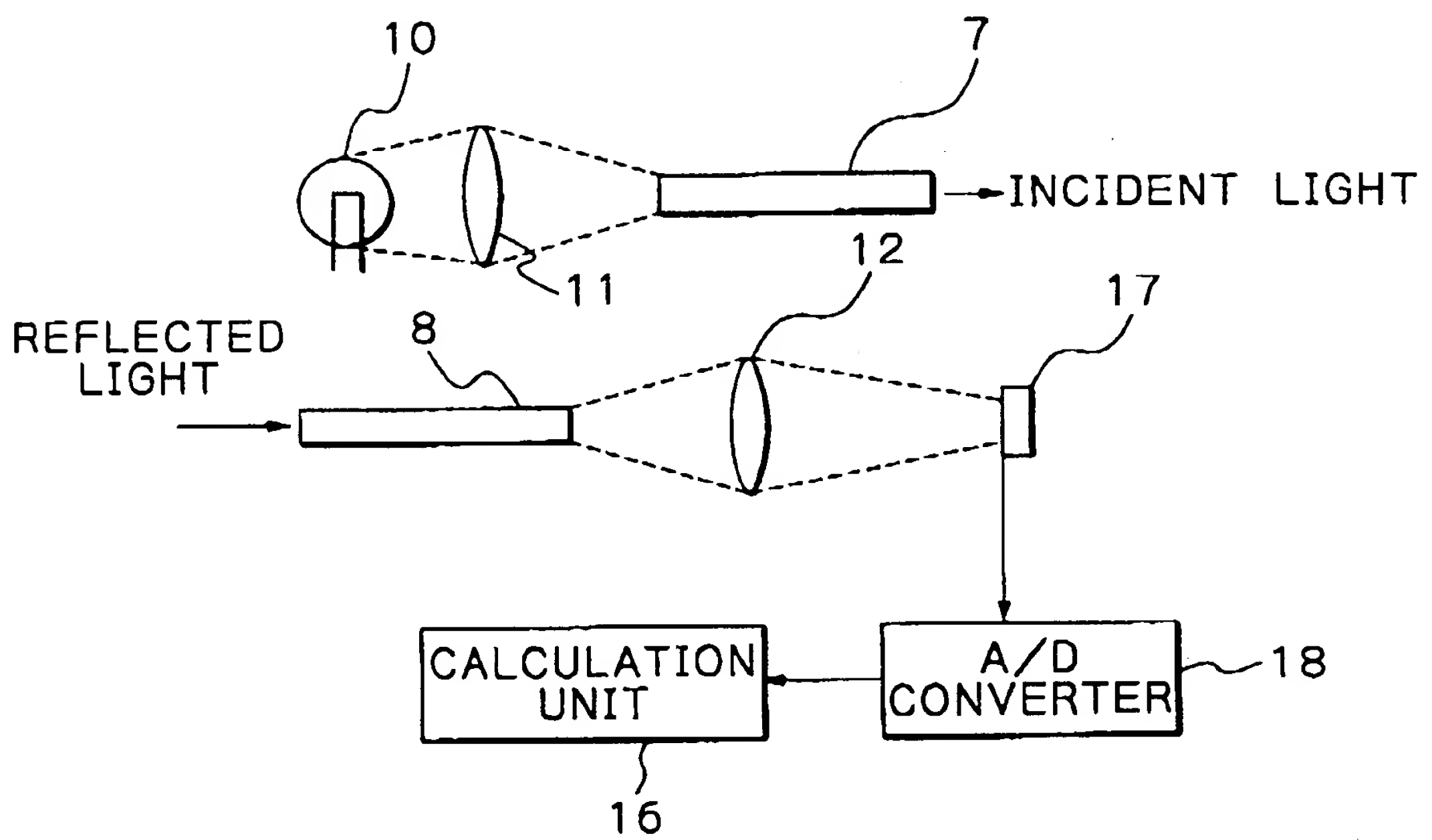


Fig. 10

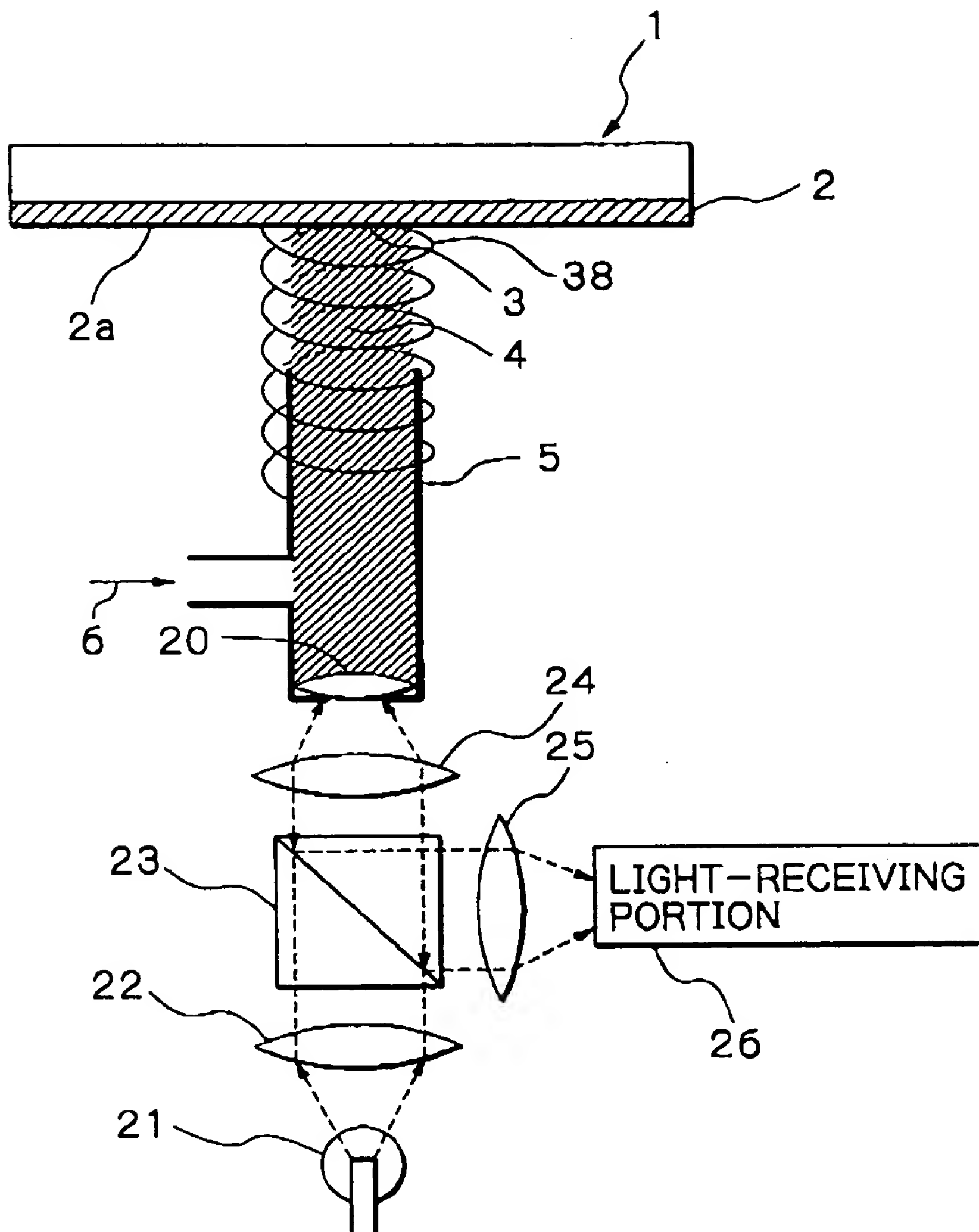


Fig. 11

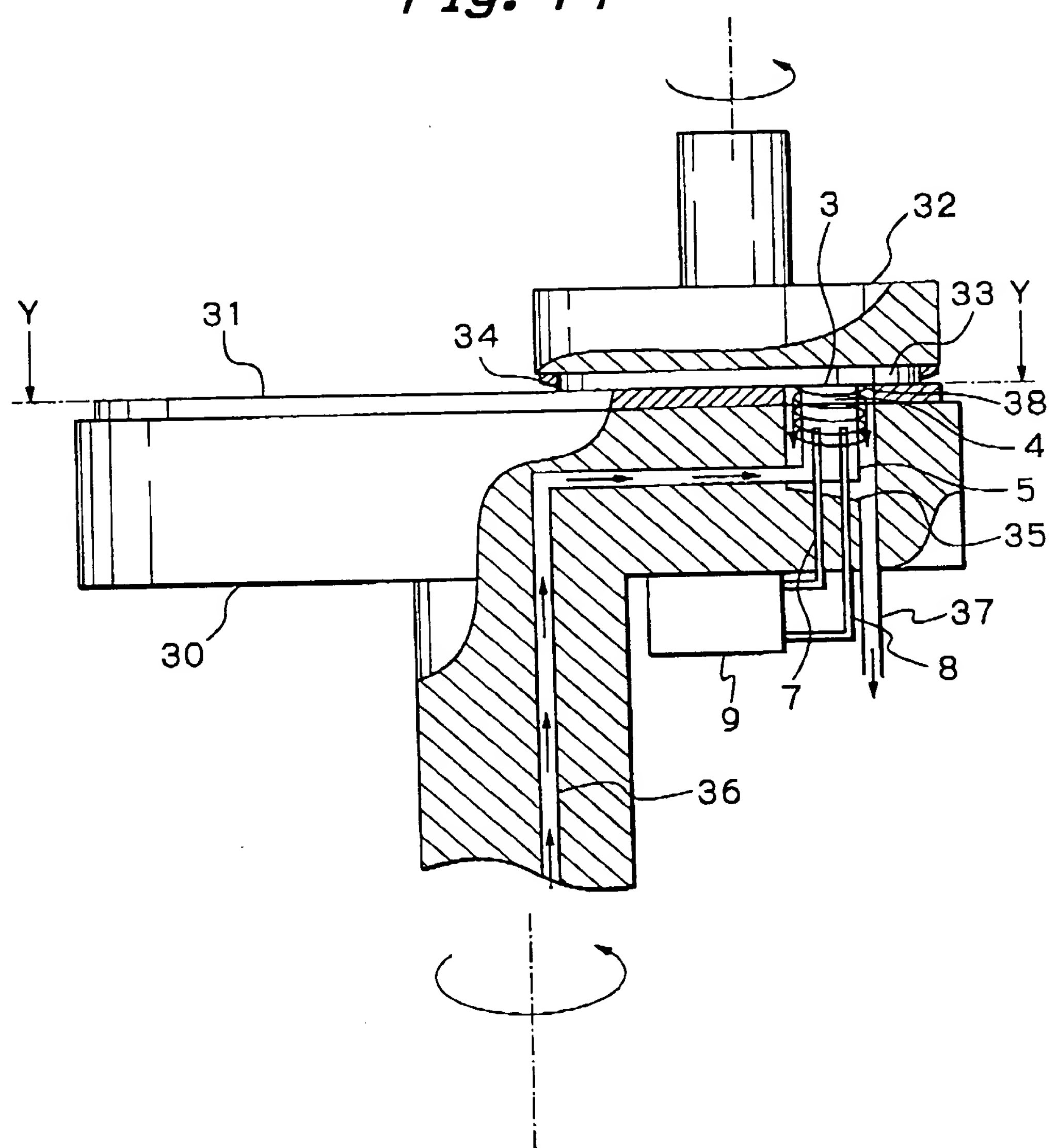


Fig. 12

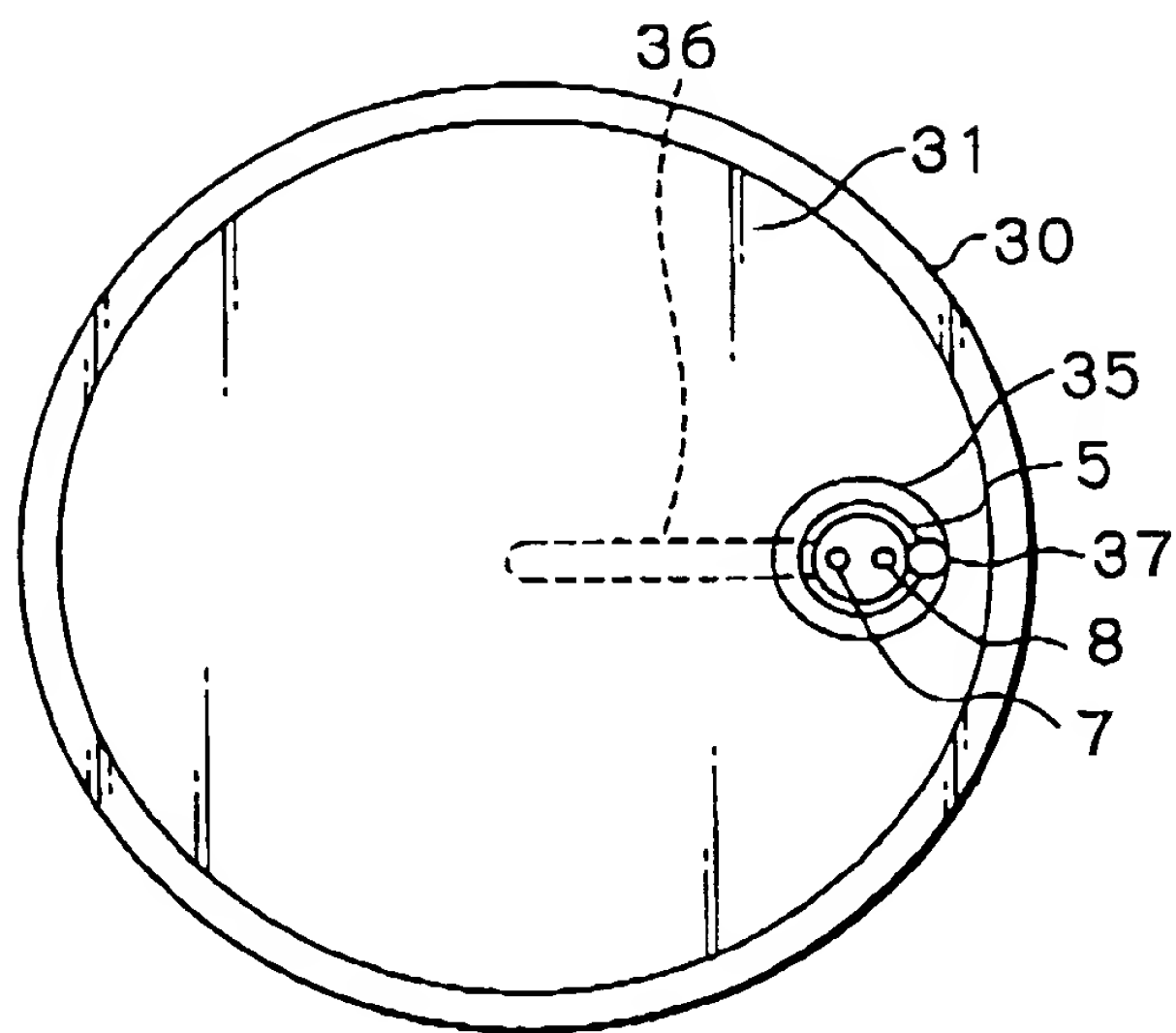


Fig. 13

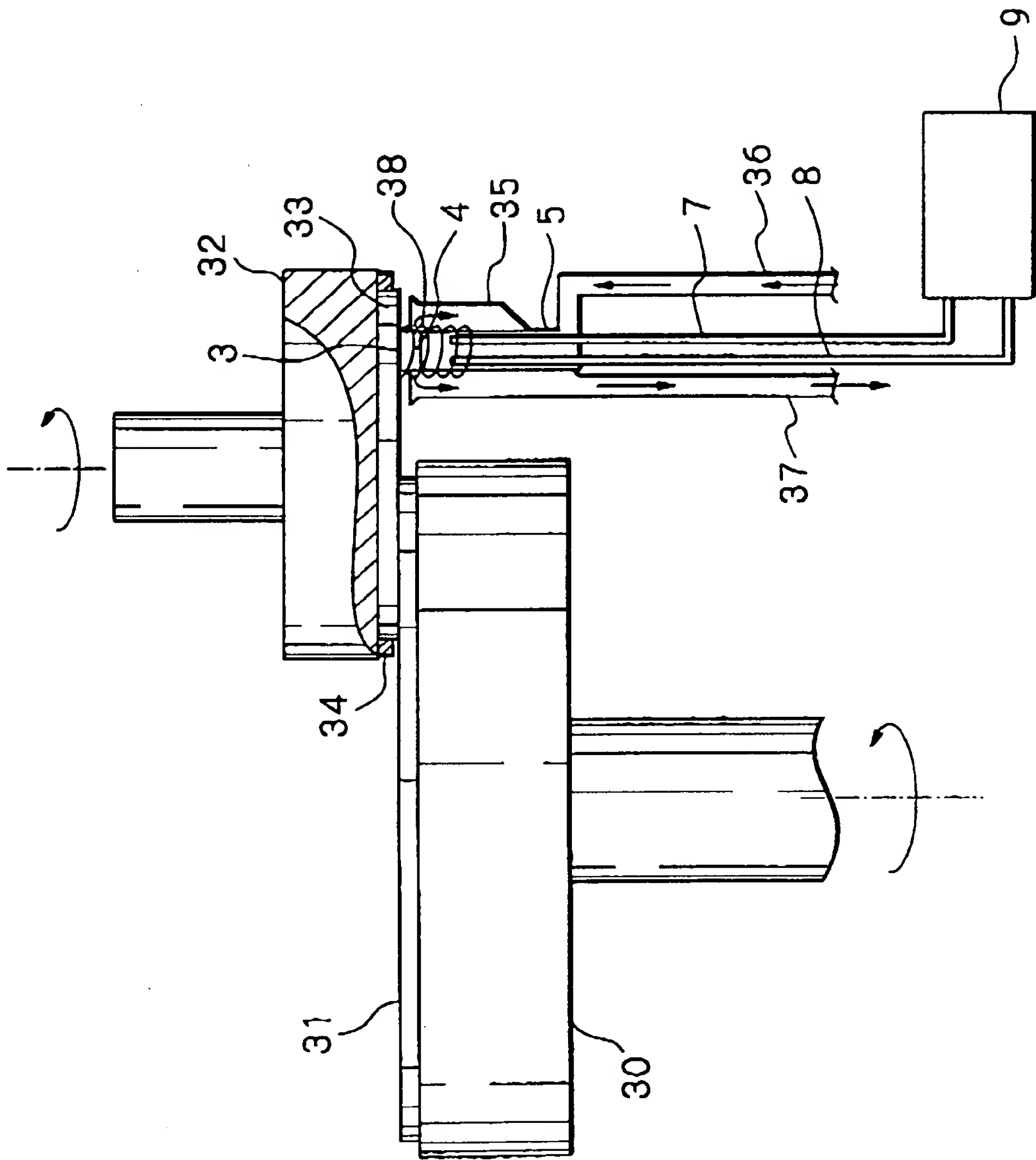


Fig. 14

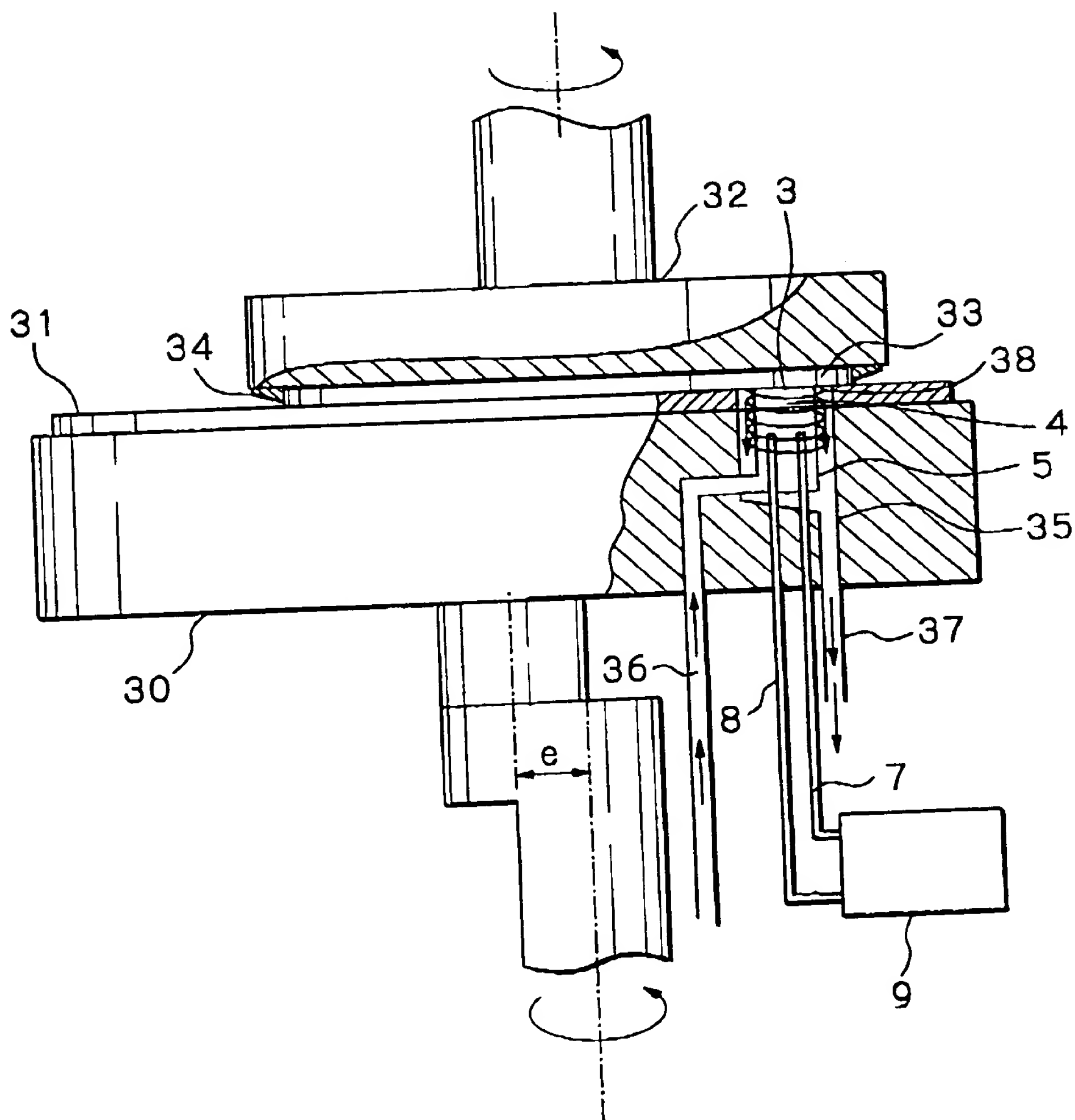
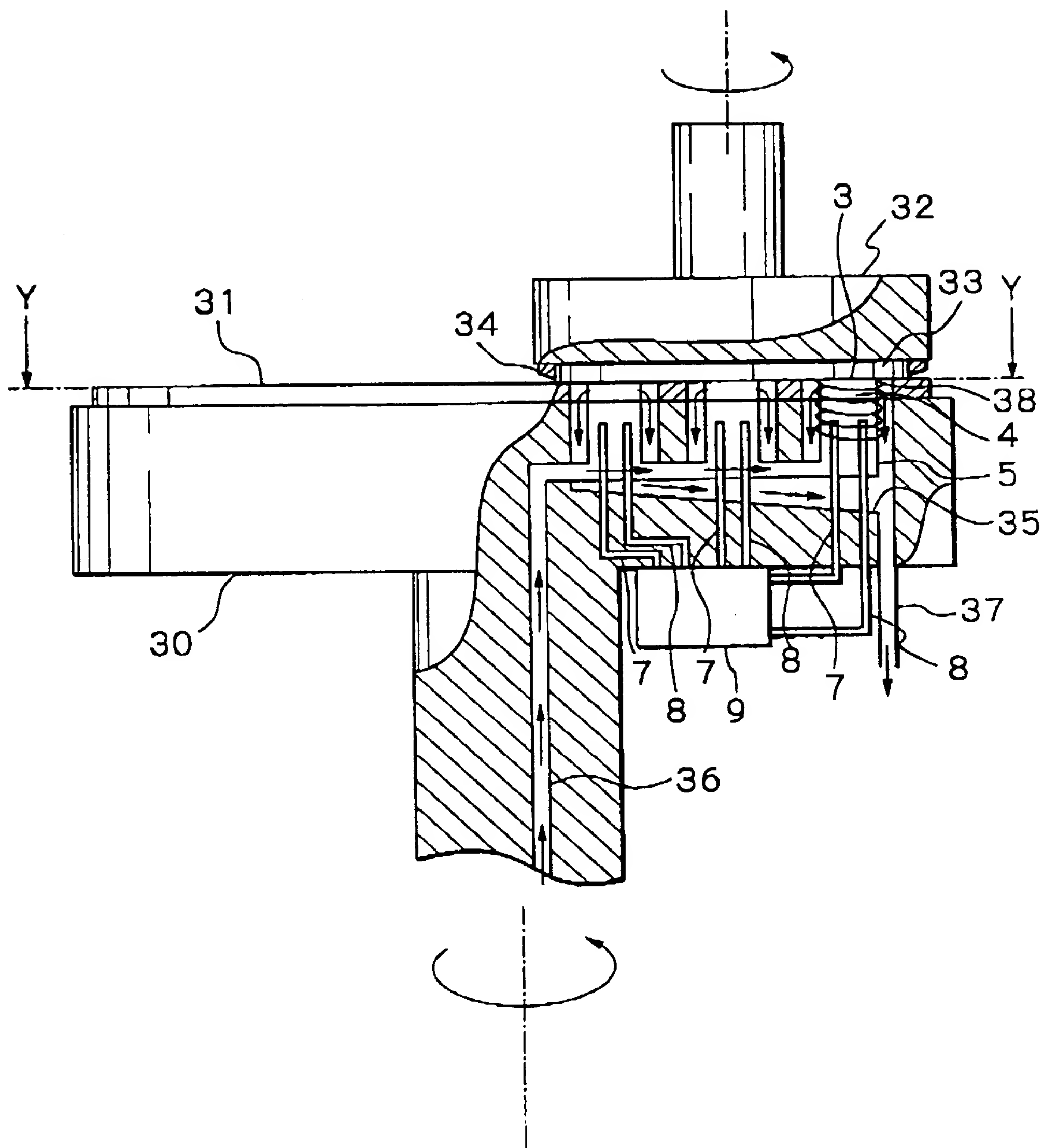


Fig. 15



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Fig. 16

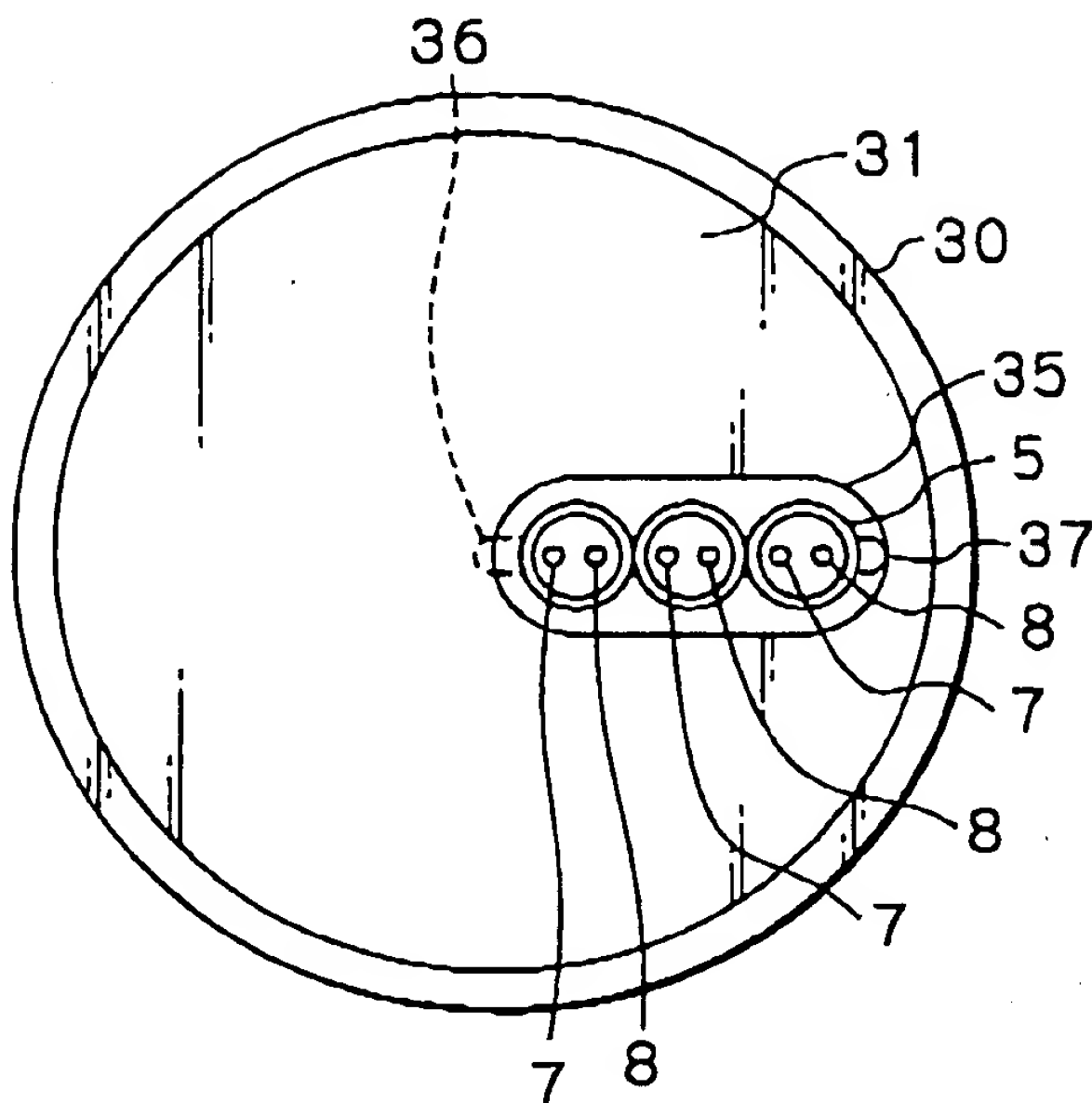


Fig. 17

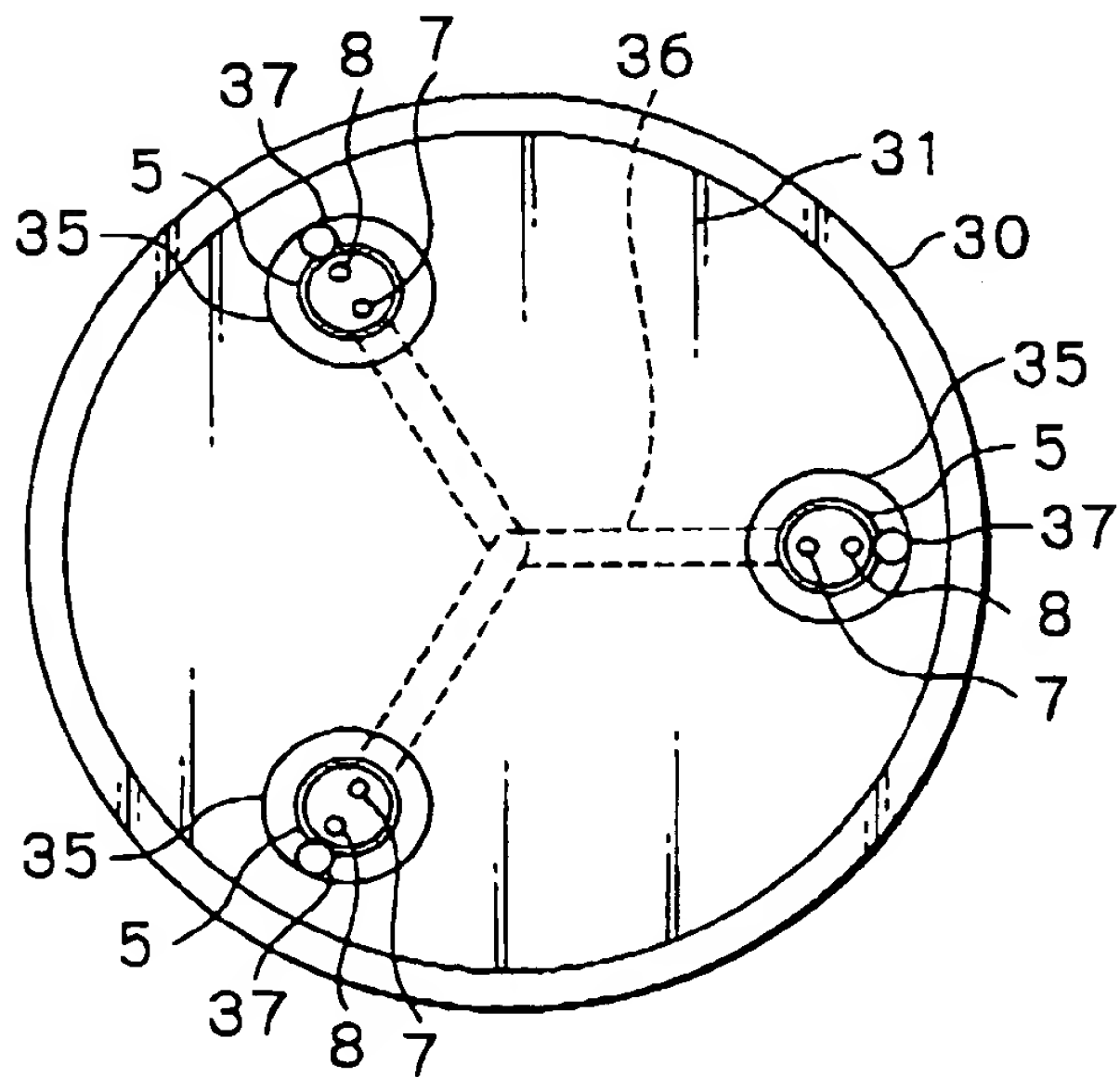


Fig. 18

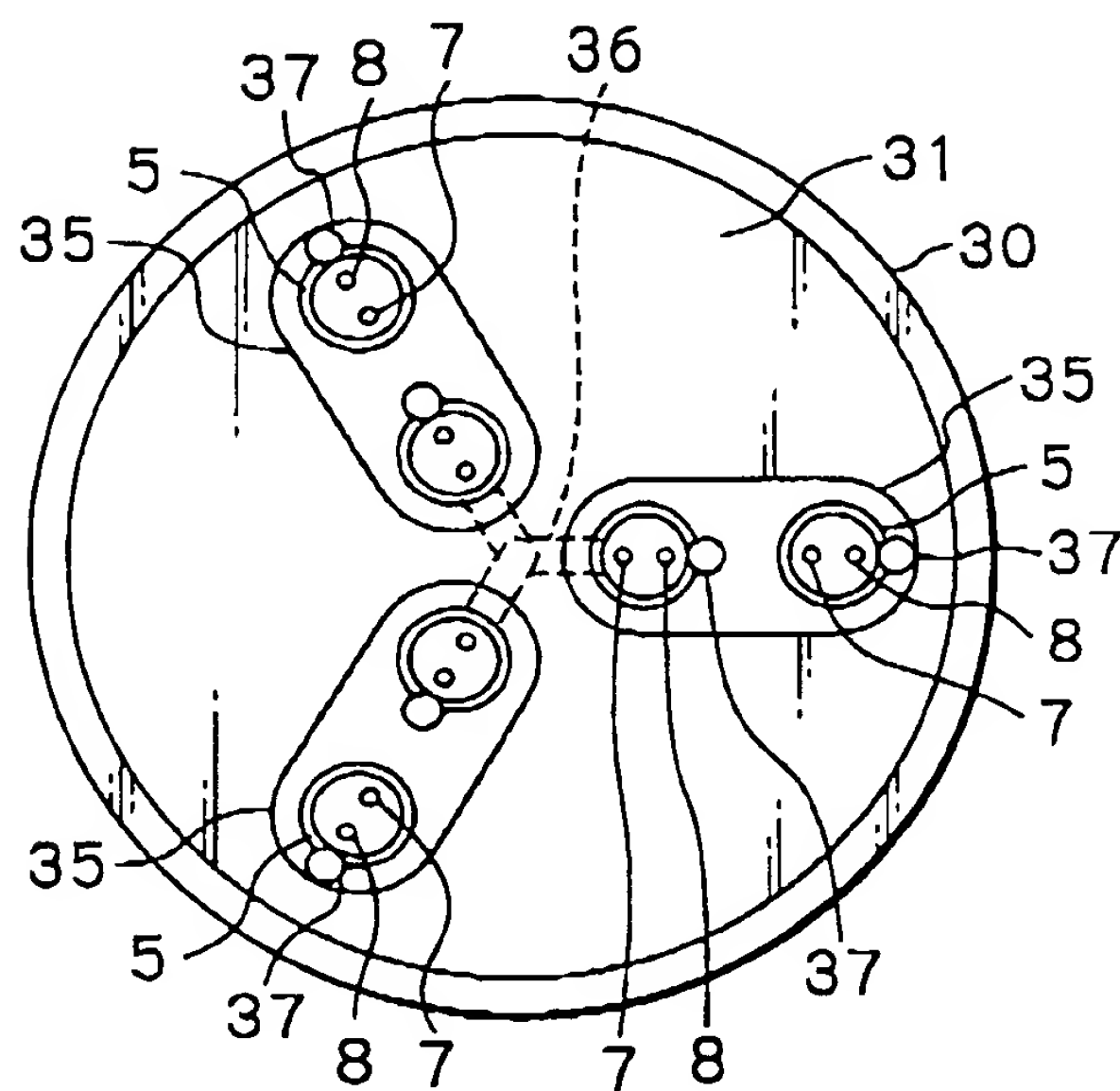


Fig. 19

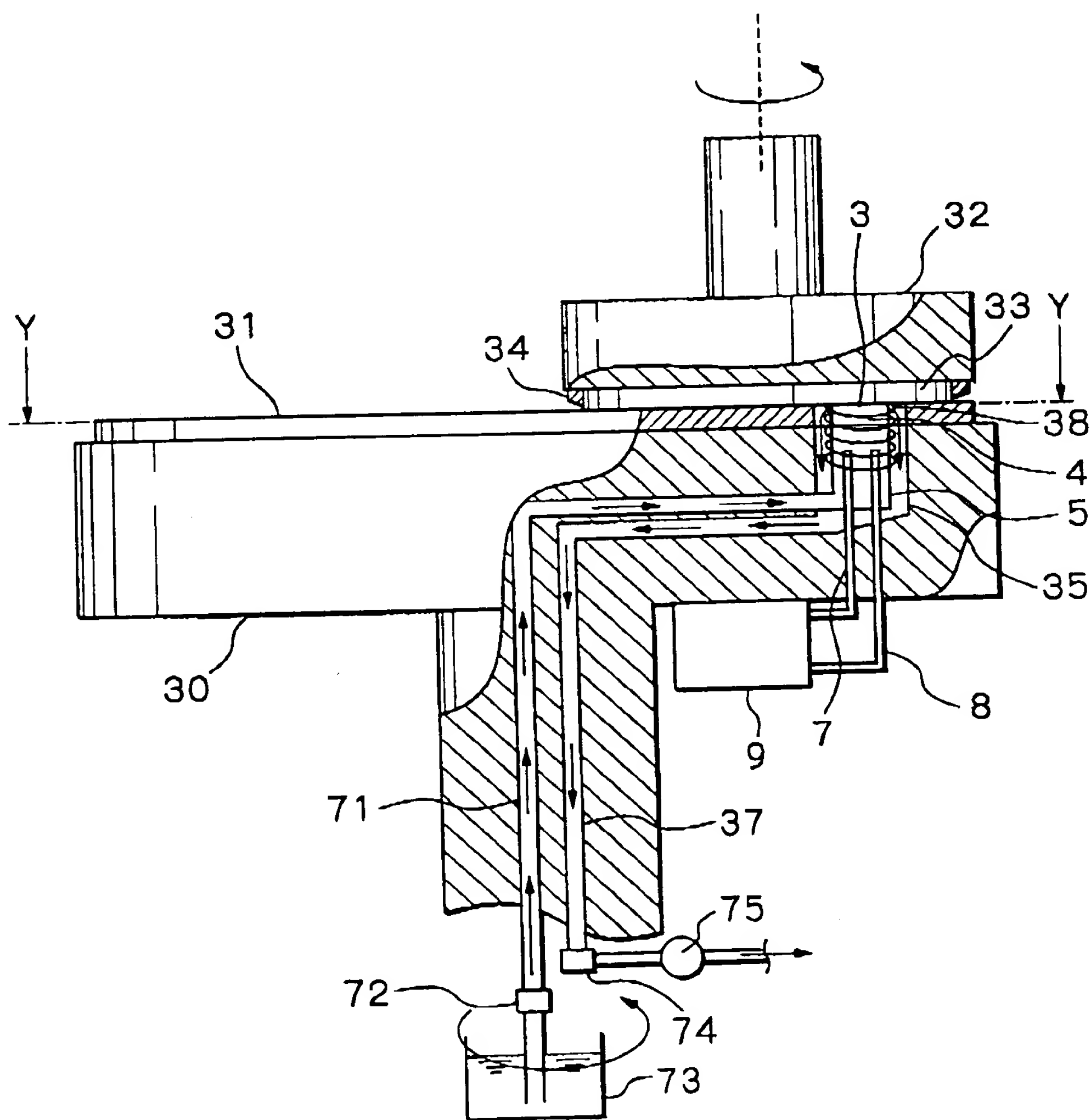


Fig. 20

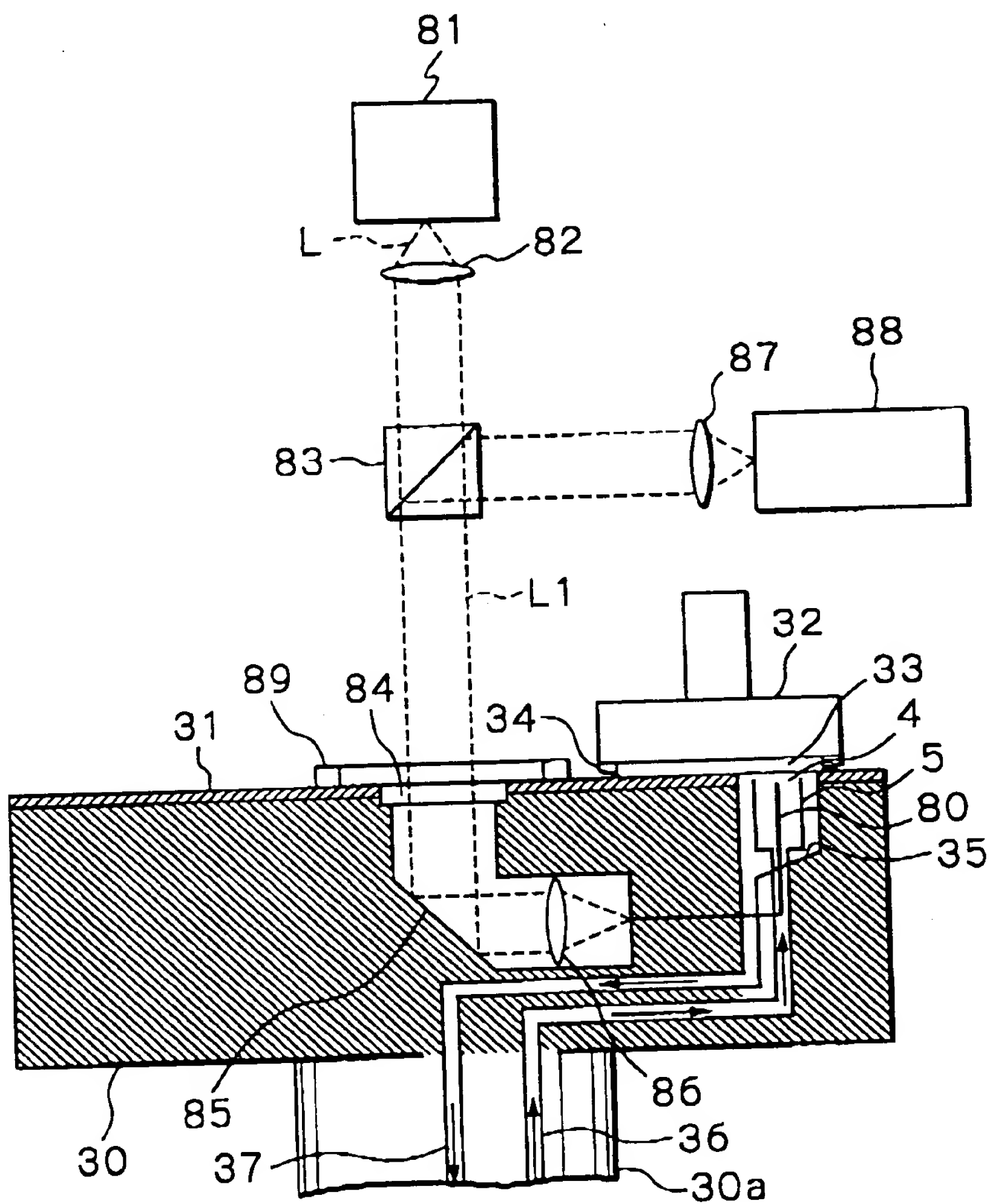


Fig. 21

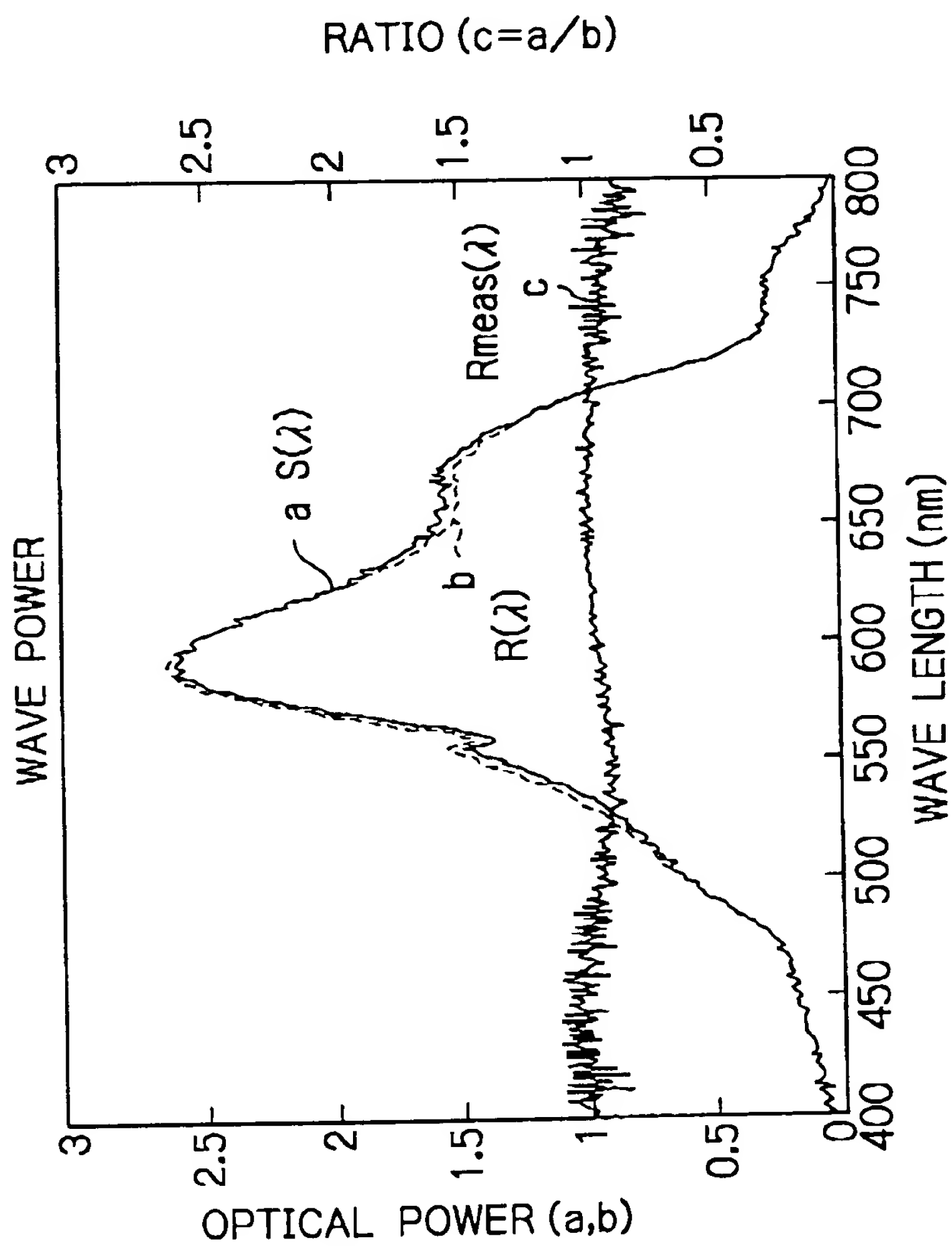


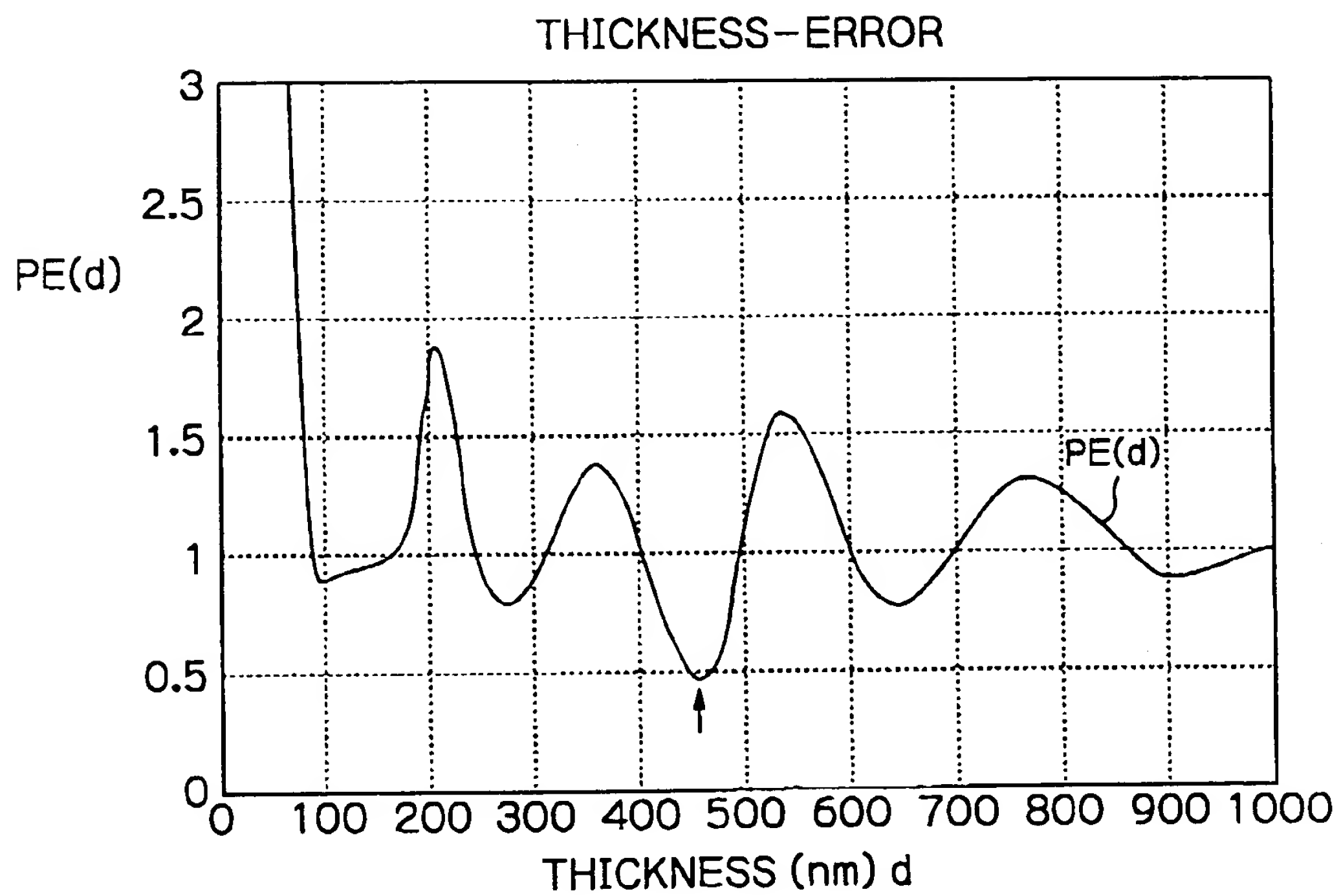
Fig. 22

Fig. 23

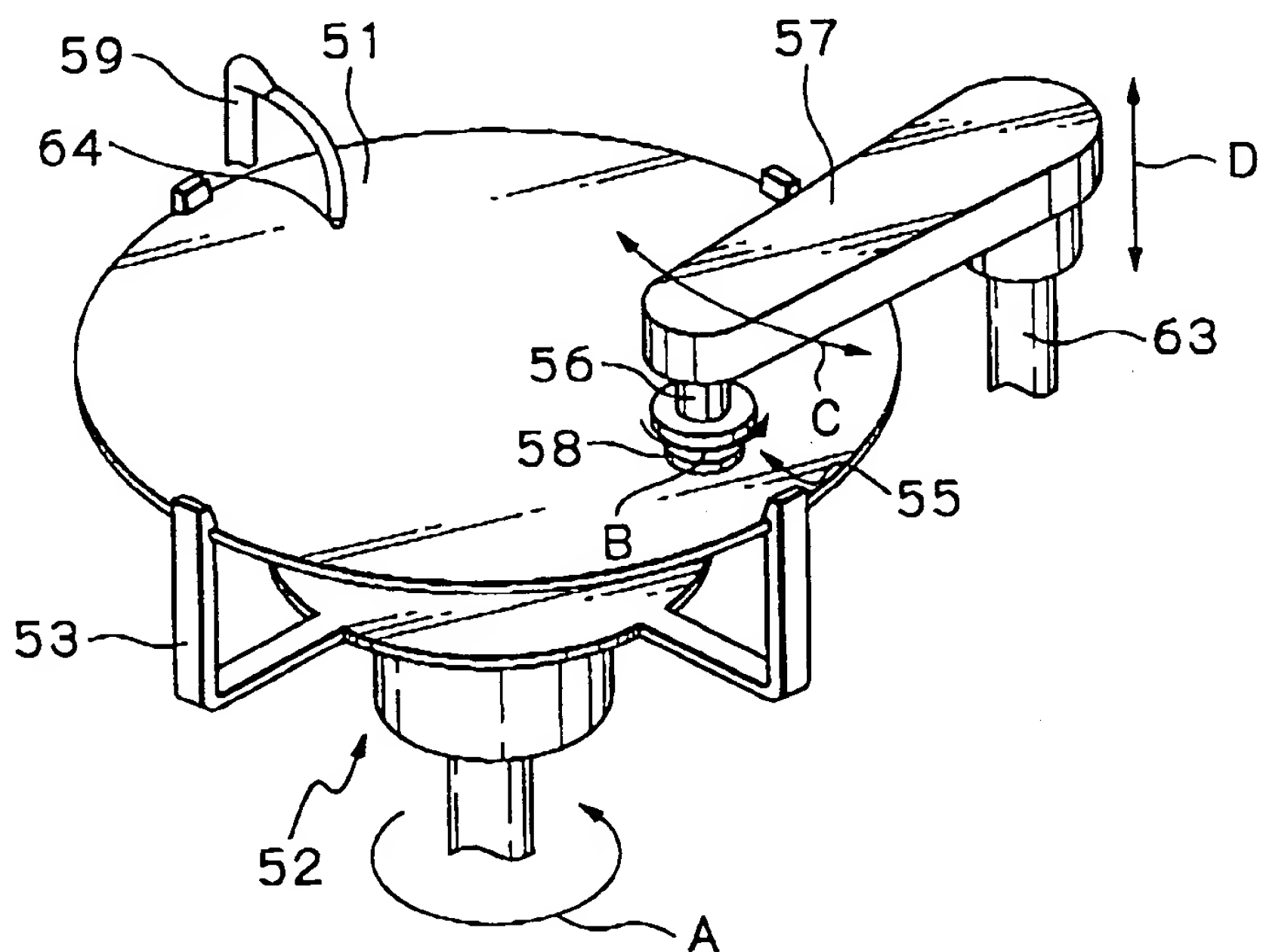


Fig. 24

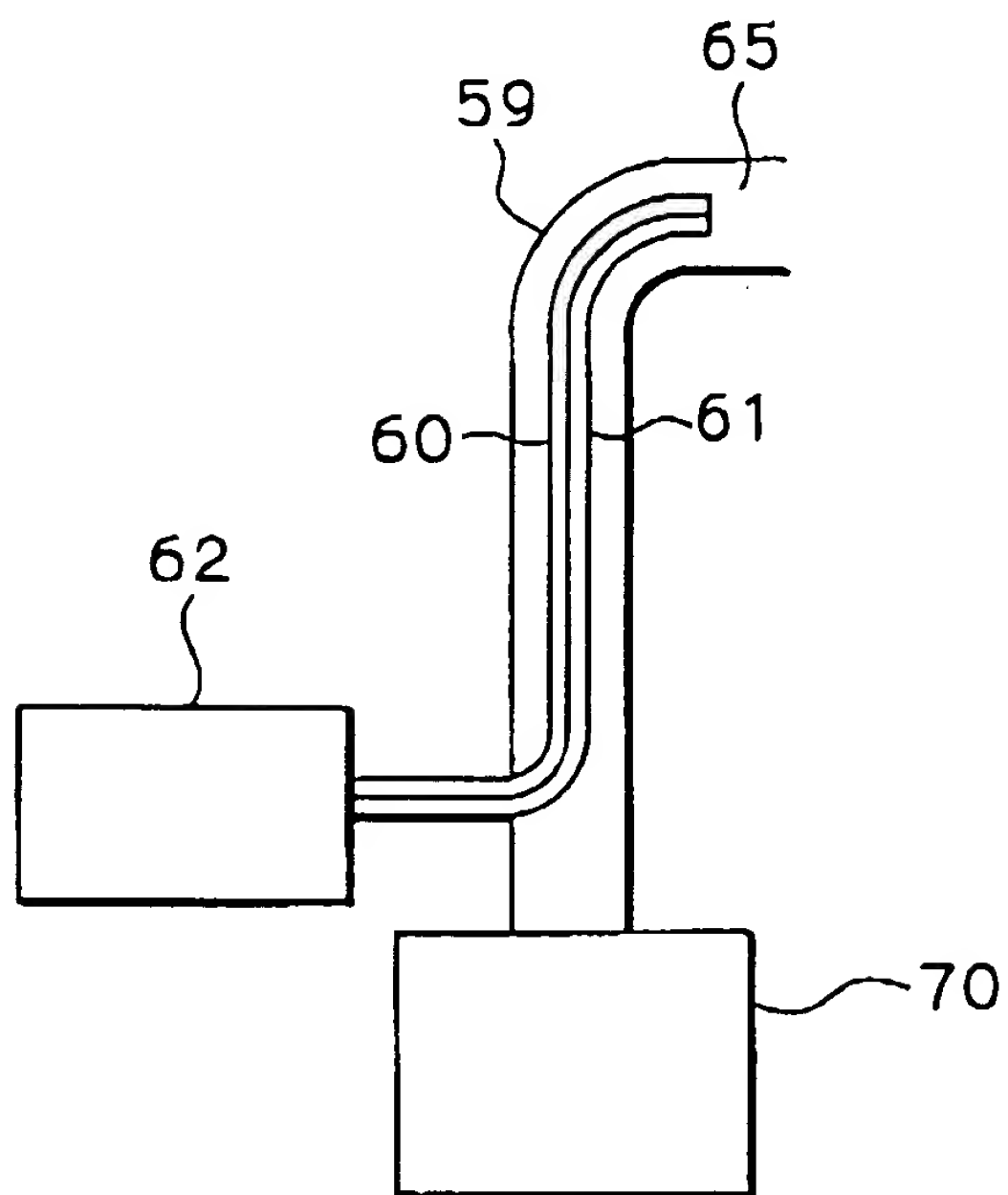


Fig. 25

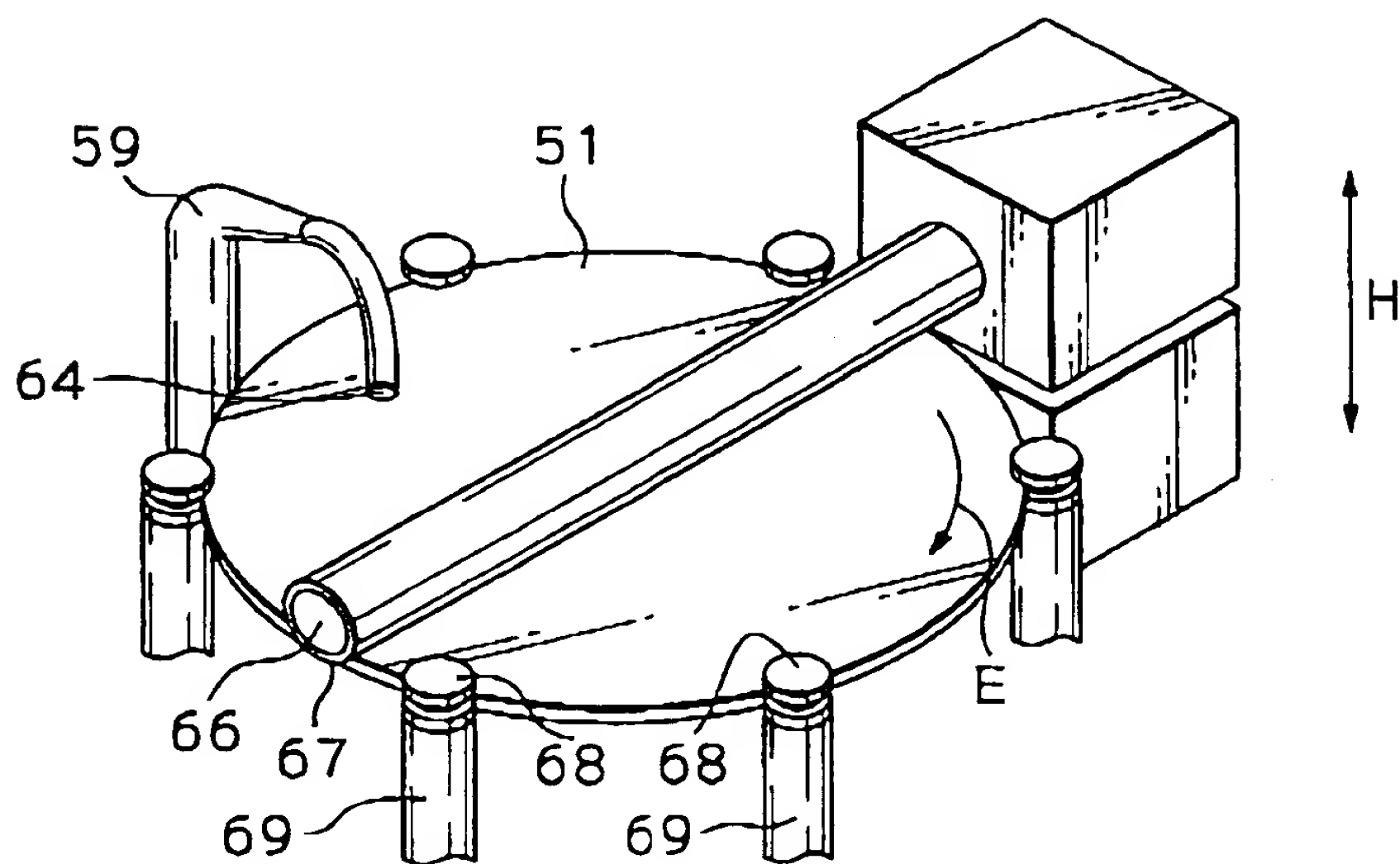


Fig. 26

